

SOE MATTERS

RIGHT TRACK



An FAW employee works on an assembly line in Changchun, Jilin province, in September. ZHANG NAN / XINHUA

Central firms walk the reform talk

Three-year plan gets going with focus on market-oriented, law-based new era

By **ZHONG NAN** in Beijing and **LIU MINGTAI** in Changchun

Some of China's State-owned enterprises or SOEs that are centrally administered are stepping out of their monopoly roles and setting new goals to ensure resource allocation is determined by market forces, thus enhancing their competitiveness.

This follows the nation's decision to create more favorable conditions for the upcoming three-year action plan for SOEs.

The action plan is designed to implement the measures outlined by the 19th National Congress of the Communist Party of China in late 2017.

The Party's vision for SOEs is that they should adapt to the market-oriented and law-based rules and norms in the new era as soon as possible. SOEs are expected to assume greater responsibility in an open and innovative environment.

In line with the new thinking, China Baowu Steel Group Corp Ltd, or China Baowu, plans to build a high-quality iron and steel ecosystem and evolve into a strong player in the global market.

"We will focus on high-end technology, efficiency and market share as well as ecological digitization and internationalization. We have built a world-class indicator system consisting of 28 items and seven categories," said Chen Derong, chairman of the Shanghai-headquartered State-owned steel maker.

Besides taking a controlling stake in Shanxi-based stainless steel giant Taiyuan Iron and Steel (Group) Co in August, China Baowu implemented a performance-driven strategy to encourage managers to make breakthroughs and achieve progress.

Apart from improving its working mechanism including project operations, examination and assessment, training, dedicated platforms and performance evaluation, the company has set up models and applied the experience gained in its pursuit of higher efficiency and quality.

China Baowu is a group formed from the merger of Shanghai-based Baosteel Group and Wuhan Iron and Steel Group in Central China's Hubei province in December 2016.

It is currently the country's most competitive steel maker. Its output totaled 95.46 million metric tons in 2019.

Xu Liuping, chairman of China FAW Group Co Ltd, a Changchun-based automaker, said the company is eager to improve the market-oriented operation mechanism and vigorously promote mixed-ownership reform.

He said the company has set a higher sales target for Hongqi, or Red Flag, a sub-brand of FAW, for

coming years, as the Chinese premium marque has become more popular than expected.

Thanks to its growing investment in research and development, especially in areas such as modern design, digital and electric power-related technologies, Hongqi car sales totaled 108,000 units from January to August this year, up 108.5 percent on a yearly basis, despite a 9.7 percent fall in sales of China's overall passenger car market during the same period.

"The sales goal of 200,000 units for Hongqi this year will not be an issue," he said, adding the group is considering a more aggressive target for this brand, pushing its sales in 2021 to at least double this year's figure.

Xu said Hongqi's new models including the H9 sedan have helped boost sales and a more important electric SUV, the E-HS9, is expected to hit the market in the last quarter this year.

The brand will launch 17 new models by 2025 to cater to a younger customer base and thus cultivate a larger following.

As the government has pledged continuous efforts to level the playing field for private companies and rolled out steps to broaden market access for them, FAW Group partnered with Contemporary Amperex Technology Co Ltd, China's largest automotive lithium-ion battery maker by production volume.

Contemporary Amperex is a private sector company based in East China's Fujian province. The two

companies started to run a manufacturing facility to produce batteries for electric vehicles in Ningde, Fujian province, late last month. The batteries manufactured at this facility are designed to match the requirements of FAW Group's electric vehicles.

China will take more steps to implement the three-year action plan on reforming the country's SOEs, said officials at the national teleconference on the implementation of the action plan held in Beijing late last month.

The SOEs should become market entities with core competitiveness and push forward the mixed-ownership reform in an active yet prudent manner, according to the information released by the State-owned Assets Supervision and Administration Commission of the State Council at the conclusion of the conference.

Vice-Premier Liu He, who is also a member of the Political Bureau of the Communist Party of China Central Committee and head of the State Council leading group for SOE reform, attended and addressed the conference.

The conference urged the SOEs to play a larger role in leading innovation efforts as well as actions to improve the industrial and supply chains.

The SOEs will act as a safeguard in terms of maintaining social development and improving people's livelihoods, according to the meeting.

Contact the writers at zhongnan@chinadaily.com.cn

R&D of nuclear reactor signifies big milestone

By **ZHONG NAN**

Third-generation nuclear reactor technology has broken foreign monopolies in many fields and will enable China to own independent intellectual property rights and harness export potential, said senior executives of State Power Investment Corp.

Their comments came after SPIC, one of China's three nuclear power developers and operators, announced the completion of research and development of the country's third-generation nuclear reactor project called CAP1400, or Guo He One, early last week.

The CAP1400 R&D is the latest achievement in China's nuclear power technology development and industrial innovation.

Based on the third-generation nuclear technology of AP1000, imported in 2007, the CAP1400 has made great technological innovations over 12 years of hard work by more than 26,000 Chinese technology engineers from 477 Chinese companies with various specializations, said Zheng Mingguang, chief designer of the CAP1400 nuclear reactors.

In addition to technologies, equipment is critical to the sustainable growth of nuclear projects, he said.

About 90 percent of the CAP1400's equipment is domestically made. All its key parts and materials, like the reactor coolant pumps, squib valves, steam generators, reactor pressure vessel internals, control rod drive mechanisms, large forgings and nuclear-grade welding material, are all domestically designed and manufactured, he said.

In comparison with the second-generation version, the new reactor, with a design life of 60 years, extends the non-manual intervention time from 30 minutes to 72 hours, and dramatically improves safety performance against natural disasters like earthquakes and floods by 100 times, said Lu Hongzao, SPIC's assistant president.

"The CAP1400 nuclear reactors will be powerful electricity suppliers," said Lu. "For instance, each reactor can provide 1.5 million kilowatt-hours of electricity to the grid. Therefore, it is able to provide nearly 13 billion kilowatt-hours on a yearly basis."

As this technology is competitive in the global market with a relatively high degree of safety and lower costs, SPIC is promoting the CAP1400 for exports. It is discussing potential partnerships with countries such as South Africa and Turkey, said Hao Hongsheng, general manager of the company's nuclear energy department.

He said because the construction cost for the reactors can be cut by 20 percent after achieving mass production, the group is optimistic about the long-term export potential of the CAP1400.

The annual generating capacity of a single CAP1400 unit can meet the electricity needs of over 22 million residents and reduce greenhouse gas emissions such as carbon dioxide by more than 9 million metric tons a year, he said.

China had 13 nuclear power units under construction, with a total installed capacity of 13.87 million kW by the end of 2019, ranking first in the world.

It is estimated that by 2025, the country's installed nuclear power capacity in operation will reach 70 million kW, with 30 million kW already under construction, according to the Beijing-based China Nuclear Energy Association.

A number of nuclear power plants of SPIC are under construction or already in operation. Prominent among them are the Hongyanhe nuclear power plant in Northeast China's Liaoning province, and Haiyang and Rongcheng nuclear power plants in East China's Shandong province.

SPIC also has reserved several project sites in both inland and coastal areas of China.

It has built a presence in 41 countries and regions such as Japan, Australia, Malta, India, Turkey, South Africa, Pakistan and Brazil.

Its businesses cover power project investment, technical cooperation, and engineering, procurement and construction.

The Beijing-based State-owned enterprise has 115 mW of controllable overseas projects in operation and 10.05 gW under construction.

By expanding its energy markets at home and abroad, SPIC aims to become an international innovative and integrated energy group and modern SOE, which is driven by innovation of nuclear power and other advanced energy technologies.

Ma Yu, a senior researcher at the Beijing-based Chinese Academy of International Trade and Economic Cooperation, said the focus of nuclear project construction across the globe is expected to shift from developed to developing countries, especially to many economies related to the Belt and Road Initiative.

Advanced nuclear projects are already under development in inland provinces. China's third-generation nuclear reactor technologies will strongly ensure the healthy growth and integrated development of the Yangtze River Delta, the Guangdong-Hong Kong-Macao Greater Bay Area and the Beijing-Tianjin-Hebei region as well as the Hainan Free Trade Port in the future.

‘Great Wall’, China’s largest tunnel borer, to weaken foreign firms’ monopoly

By **ZHONG NAN**

CCCC Tianhe Mechanical Equipment Manufacturing Co rolled out the Changcheng, or Great Wall, China's largest tunnel-boring machine or TBM, last week.

The monster machine measures 16.07 meters in diameter, and is 145 meters long and weighs 4,500 metric tons.

It marks a fresh breakthrough in the country's push for high-end machinery production in a world that has been dominated by developed countries.

CCCC Tianhe Mechanical Equipment is a subsidiary of China Communications Construction Co, a State-owned construction giant.

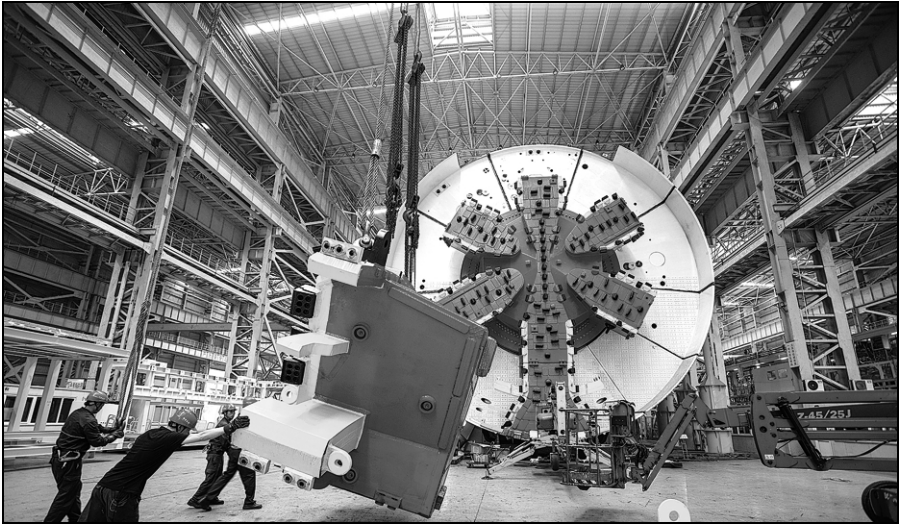
With a long-term operational life cycle, the giant machine is the largest in the domestic market, said Zhang Boyang, chairman of the Jiangsu province-based company.

TBMs are used to excavate tunnels, subway tubes and sewer lines. In comparison with traditional tunnel boring methods like rock drilling, blasting and hand mining in soil, the use of such giant TBMs could minimize the impact on the surrounding ground and produce a smooth tunnel wall, helping certain tunnel projects run through unstable geological conditions.

As many Chinese and global cities have increasingly deployed resources to improve their transportation infrastructure to boost coordinated regional development, commercial and service activities, the company is building eight large-diameter TBMs, Zhang said.

Orders have been placed until 2022.

While China has exported smaller TBMs, the global market has mainly



Employees of CCCC Tianhe Mechanical Equipment Manufacturing Co assemble the parts of a tunnel boring machine at a workshop in Changshu, Jiangsu province, in September. PROVIDED TO CHINA DAILY

been dominated by companies from advanced countries such as Germany, Japan and South Korea.

But the super-large Great Wall TBM shows the steady rise of China's manufacturing capabilities in this area, Zhang said.

The Great Wall TBM will be used in the reconstruction project of Beijing's East Sixth Ring Road. The project has a 9.2 km-long tunnel section, of which about 7.4 km will be constructed by TBMs.

The Great Wall TBM can achieve an ultra-long tunneling distance of 4,800 meters without changing the tool in Beijing's sand and gravel stratum, and has reached the world's advanced level in technical fields such as atmospheric tool change,

automatic segment assembly and fiber optic wear detection, said Su Zimeng, executive vice-president of the China Construction Machinery Association in Beijing.

The reconstruction project of Beijing's East Sixth Ring Road will use two domestically made TBMs with the same diameter. They need to pass through the core area of Beijing's sub-city center in Tongzhou district, CCCC Tianhe executives said.

In addition to the complex underground space, the route will intersect with several roads, rivers and railway tracks. The average overburden is 20 meters, and the deepest overburden is 45 meters.

"It is rare for an infrastructure project to adopt domestically manufactured TBMs," Su said.

Over the past decade, Su said, Chinese manufacturers have made remarkable progress in technologies, life cycle, equipment materials, service and other aspects in this area.

China's achievements not only break the foreign companies' monopoly in many segments, but will also cut the project costs for clients at home as well as abroad.

With around 30,000 precision components and mechanical engineering, electrical, sensing, information and new material technologies, a TBM is considered a gauge of a country's level of equipment manufacturing expertise.

TBMs support railway and highway projects. They are getting larger as tunnels become wider to integrate utilities such as water supply and drainage pipes, telecommunication and power cables, said Yang Hui, head of CCCC Tianhe's research and development unit.

The company's TBM project is supported by a team of more than 170 engineers, he said.

Sun Fuquan, a researcher at the Chinese Academy of Science and Technology for Development in Beijing, said the world's TBM demand will surge as many countries are seeking to create jobs and stimulate trade flows via big-ticket transportation and infrastructure projects, which require tunnels.

Many projects such as urban subways and railways that traverse mountains or waterways usually require the technical support of TBMs.

Backed by their products' durability, global service network and price advantage, Chinese engineering equipment makers are set to become some of the largest beneficiaries of the tangible growth of the Belt and Road Initiative, Sun said.

"It is critical for them to enhance brand recognition and a localization process to further compete with well-established global rivals such as Germany's Herrenknecht AG and Japan's Kawasaki Heavy Industries."

CCCC Tianhe Mechanical Equipment Manufacturing Co rolled out the Changcheng, or Great Wall, China's largest tunnel-boring machine or TBM, last week.

The monster machine measures 16.07 meters in diameter, and is 145 meters long and weighs 4,500 metric tons.

It marks a fresh breakthrough in the country's push for high-end machinery production in a world that has been dominated by developed countries.

CCCC Tianhe Mechanical Equipment is a subsidiary of China Communications Construction Co, a State-owned construction giant.

With a long-term operational life cycle, the giant machine is the largest in the domestic market, said Zhang Boyang, chairman of the Jiangsu province-based company.

TBMs are used to excavate tunnels, subway tubes and sewer lines. In comparison with traditional tunnel boring methods like rock drilling, blasting and hand mining in soil, the use of such giant TBMs could minimize the impact on the surrounding ground and produce a smooth tunnel wall, helping certain tunnel projects run through unstable geological conditions.

As many Chinese and global cities have increasingly deployed resources to improve their transportation infrastructure to boost coordinated regional development, commercial and service activities, the company is building eight large-diameter TBMs, Zhang said.

Orders have been placed until 2022.

While China has exported smaller TBMs, the global market has mainly